

Calculus Sub-Group Questions A

Calculate the total area between $f(x)$ and the x-axis over the given x-interval. Show all work.

1. $f(x) = x^2 ; [-1, 1]$

4. $f(x) = x^2 - 1 ; [-3, 3]$

2. $f(x) = -2x^3 + 2 ; [0, 1]$

5. $f(x) = \frac{2}{\sqrt{x}} ; [1, 4]$

3. $f(x) = -x^2 + 1 ; [0, 2]$

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Calculus Sub-Group Questions B

Calculate the total area between $f(x)$ and the x-axis over the given x-interval.

1. $f(x) = 2x^2 ; [-1, 1]$

4. $f(x) = x^2 - 1 ; [-2, 2]$

2. $f(x) = -2x^3 + 3 ; [0, 1]$

5. $f(x) = \frac{2}{\sqrt{x}} ; [4, 9]$

3. $f(x) = -x^2 + 2 ; [0, 3]$

Calculus Sub-Group Questions B

Calculate the total area between $f(x)$ and the x-axis over the given x-interval.

1. $f(x) = 2x^2 ; [-1, 1]$

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2. $f(x) = -2x^3 + 3 ; [0, 1]$

5. $f(x) = \frac{2}{\sqrt{x}} ; [4, 9]$

3. $f(x) = -x^2 + 2 ; [0, 3]$

Calculus Sub-Group Questions C

Calculate the total area between $f(x)$ and the x-axis over the given x-interval.

1. $f(x) = 3x^2 ; [-1, 1]$

2. $f(x) = -x^3 + 4 ; [0, 1]$

3. $f(x) = -x^2 + 3 ; [0, 5]$

4. $f(x) = x^2 - 4 ; [-3, 3]$

5. $f(x) = \frac{3}{\sqrt{x}} ; [4, 9]$

Calculus Sub-Group Questions C

Calculate the total area between $f(x)$ and the x-axis over the given x-interval.

1. $f(x) = 3x^2 ; [-1, 1]$

2. $f(x) = -x^3 + 4 ; [0, 1]$

3. $f(x) = -x^2 + 3 ; [0, 5]$

4. $f(x) = x^2 - 4 ; [-3, 3]$

5. $f(x) = \frac{3}{\sqrt{x}} ; [4, 9]$

Calculus Sub-Group Questions D

Calculate the total area between $f(x)$ and the x-axis over the given x-interval.

1. $f(x) = 6x^2 ; [-1, 1]$

2. $f(x) = -x^3 + 4 ; [0, 2]$

3. $f(x) = -x^2 + 4 ; [0, 5]$

4. $f(x) = x^2 - 4 ; [-3, 4]$

5. $f(x) = \frac{1}{2\sqrt{x}} ; [1, 4]$

Calculus Sub-Group Questions D

Calculate the total area between $f(x)$ and the x-axis over the given x-interval.

1. $f(x) = 6x^2 ; [-1, 1]$

2. $f(x) = -x^3 + 4 ; [0, 2]$

3. $f(x) = -x^2 + 4 ; [0, 5]$

4. $f(x) = x^2 - 4 ; [-3, 4]$

5. $f(x) = \frac{1}{2\sqrt{x}} ; [1, 4]$